Spring-Flowering Bulbs

Flowering bulbs like daffodils, tulips, hyacinths and crocus are some of the earliest flowers to appear in gardens each year, some starting to bloom as early as January. Many will bloom and multiply for years with minimal care, while others are best planted for one season's show of color in our hot climate. Bulbs can be planted in flower beds, in lawns, around trees, or grown in pots or window boxes.

Daffodils naturalized under trees, blooming in late winter. Karen Russ, ©2007 HGIC, Clemson Extension

The term "bulb" is commonly used to refer to true bulbs and other bulb-like structures such as corms, tubers, tuberous roots and stems, and rhizomes. Bulb-like structures store food to ensure the plant's survival during unfavorably cold or droughty weather.

Spring bulbs flower from late winter to early summer, depending on species. After bloom is finished, they continue to grow and store food for a period of time before dying back to ground level and becoming dormant through the summer and into fall. Spring-flowering bulbs start to grow roots again in the fall and winter to prepare for the following spring bloom. They are planted in the fall or early winter in South Carolina.

Planting Bulbs

Bulbs grow best in full sun or part shade, but flowers will last longer if they do not receive midday sun. Most early flowering bulbs can be planted under deciduous trees since the bulbs will be going dormant by the time the trees provide heavy shade.

Good drainage is essential for spring-flowering bulbs. If drainage is a problem you can improve it by mixing 2 to 3 inches of organic matter such as shredded pine bark or compost into the beds 10 to 12 inches deep. Raised beds or drainage tiles can also help solve drainage problems.

It is best to apply fertilizer and lime according to the results of a soil test. The soil pH for most bulbs should be between 6 and 7.

It is not necessary to fertilize bulbs that are planted for only one season's flowering. Permanent bulb plantings should be fertilized by one of two methods in the absence of a soil test. The first method is to mix a slow-release complete fertilizer according to label recommendations into the rooting area at planting in the fall. The second method is to mix bone meal in the rooting area at planting time with an application of quick-release fertilizer at the rate of 1 to 2 pounds of 10-10-10 per 100 square feet in the fall. Repeat the application of 10-10-10 as soon as you see shoots emerging in the spring.

Purchase bulbs while supplies are good during September or October, but wait to plant until cooler weather. Choose firm bulbs without mold or bruising. Store bulbs in a cool area below 60 °F until planting. Plant daffodils in October or November, but wait to plant other spring-flowering bulbs until the soil temperature at planting depth
stays below 60 °F. In coastal areas, most bulbs should be planted in late December or early January.

Most bulbs require a 12- to 16- week chilling period to produce flowers. Coastal gardeners can ensure spring blooms by refrigerating bulbs in ventilated packages until planting. Avoid storing fruit near the bulbs, since fruit-produced ethylene gas can prevent blooming. When bulbs do not receive enough chilling, they bloom close to the ground, on very short stems. Some bulb suppliers sell bulbs that have already been given a chilling treatment.

In general, bulbs are planted three to four times as deep (measured from the base of the bulb) as the width of the bulb. Space bulbs in bed according to size. Large bulbs should be 3 to 6 inches apart, small bulbs 1 to 2 inches. For best appearance, plant bulbs in masses.

Cover the bed with 2 to 3 inches of mulch after planting. Mulches insulate the soil, maintain even soil moisture and prevent mud from spattering the flowers.

Normal rainfall usually provides enough moisture for spring-flowering bulbs, but in a hot or dry spring, additional water will help to prolong blooming.

Many bulbs normally send up leaves during late fall and winter. No special protection is necessary.

**Bulb Care**

In the spring, remove the flowers of tulips and daffodils after they fade to prevent seed formation. Leave the leaves on the plant for at least six weeks after bloom is finished or until they turn brown. This allows the energy from the leaves to build up the bulb for next year's bloom. If you object to the appearance of yellowing leaves, try interplanting bulbs with perennials or summer annuals for camouflage. Be sure not to dig so deeply as to damage the bulbs.

Many bulbs eventually become overcrowded and must be divided and replanted for best effect. Wait to dig bulbs until the foliage has turned yellow and withered. Divided bulbs can be replanted immediately or stored in a dry, cool area for replanting in the fall. Discard any bulbs that appear diseased.

**Problems**

For more information on insect problems of flowering bulbs, see [HGIC 2104, Flowering Bulb Insect Pests](#).

A common and frustrating problem of bulbs is failure to bloom. This can have several causes. Bulbs may rot in soils that stay wet for a long time. Good drainage is essential. Bulbs may stop blooming if they become overcrowded or shaded too heavily. Sparse blooms on daffodils can be caused by planting too shallowly. If leaves are cut off too soon in spring, the bulb may not store enough food to bloom the following year. Many varieties of bulbs will not produce flowers a second year in Southern climates.

Animals often dig and eat tulip and crocus bulbs during the winter. They rarely eat daffodil bulbs. The only sure way to protect bulbs from animals is to enclose the bulbs in wire mesh when planting.

**Daffodils**

Daffodils (*Narcissus* species and hybrids) are the most successful of the popular spring bulbs for naturalizing in the South. In general, jonquil hybrids, tazetta hybrids, poeticus and species daffodils will grow reliably throughout South Carolina. Choose cultivars of large-flowered, trumpet, double and late-blooming daffodils carefully. Many will not perform well in warmer parts of the state.

Plant daffodils in midautumn in well-drained soil where they will receive at least six hours of sun per day while in leaf. Plant daffodils 6 to 8 inches deep, less for smaller species bulbs. Space the bulbs from 3 to 6 inches apart, based on size.

**Jonquil Daffodils:** Many people call almost any small yellow daffodil a jonquil. However, jonquils are a particular class of daffodils descended from the species *Narcissus jonquilla*. This group of daffodils typically has small, yellow flowers held in clusters of two to six sweetly fragrant blooms per stem and slender rush-like leaves. Excellent jonquil cultivars include the following:

- Bell Song’ is a late-blooming white cultivar with a rose pink cup. Grows 12 inches tall.
'Baby Moon' is an intensely fragrant lemon-yellow miniature that grows 8 inches tall. It blooms midseason.

'Beryl' is a 8- to 12-inch miniature with pale yellow swept-back petals. Its short golden cup is edged with orange.

'Pipe' is a long-blooming, 12-inch cultivar with a yellow and white cup.

'Quail' is golden-yellow with deeply overlapping petals and a well-defined cup.

'Sundial' has fragrant golden-yellow, saucer-shaped blooms with a deep golden flat cup. It grows 8 inches tall.

'Sweetness' is a yellow hybrid which usually comes with one bloom per stem. The fragrant blooms are about 2 inches in diameter.

'Trevithian' is an exceptionally fragrant deep yellow that blooms early and increases well.

'Waterperry' has white petals framing a cup of light yellow that blushes to peachy-pink at maturity. It achieves best color in partial shade. Grows 12 inches tall.

**Tazetta Daffodils:** Many people call this group of daffodils "narcissus," although properly that name refers to all daffodils. Tazettas bloom prolifically with tight clusters of four to eight or more small flowers in mid-to late winter. Most have a very intense fragrance. Many tazettas, especially the paperwhites, are used for indoor forcing since they do not require a chilling period. This also makes them ideal for growing outdoors in warmer areas of South Carolina. Some tazettas are hardy only in coastal areas, while others will grow throughout the state.

- 'Avalanche' is an excellent naturalizer that has been grown since the 1700s as "Seventeen Sisters." It grows 16 inches tall with clusters of up to 20 flowers with white petals and yellow cups.
- Chinese Sacred Lily (N. tazetta var. orientalis) is hardy only in coastal areas. It is vigorous, with white petals, deep yellow cups and a sweet fragrance.
- 'Cragford' has deeply fragrant clusters of rounded blooms with white petals and small red-orange cups. It grows 14 inches tall.

- 'Erlicheer' is one of the best double-flowering daffodils for the South. This vigorous cultivar has clusters of 15 to 20 creamy white and gold fragrant flowers per 12- to 14-inch stem.
- 'Geranium' grows to 16 inches with three to five flowers per stem with white petals with an orange-red cup. This very fragrant cultivar perennializes well and blooms late midseason.
- 'Grand Soleil d'Or' is popular for forcing indoors but will grow outdoors on the coast. Yellow petals frame orange cups with a fruity fragrance. It grows to 12 inches.
- 'Minnow' is a 6-inch miniature tazetta with clusters of light yellow blooms.

**Poets Narcissus:** This is one of the few late-blooming daffodils that do really well in warm climates. Poets narcissus will also tolerate damp soil. They have broad, pure white petals with a tiny cup with a green center and a rim of bright orange or red. They are intensely fragrant, with a characteristic spicy scent.

- 'Actaea' has a striking yellow eye rimmed with red. Grows to 18 inches.
- Pheasant's eye (N. poeticus var. recurvus) is an old cultivar with creamy white petals and an orange cup. It is very late-blooming.

**Species Daffodils:** Several of the wild ancestors of our modern large-flowered daffodils are very well adapted to growing in the South. They can often be seen naturalized near long-gone home sites.
• *N. jonquilla* is the true jonquil with two to three richly scented, deep yellow flowers per stem late in the season. It grows 6 inches tall.

• *N. gracilis* has delightfully fragrant yellow flowers with tiny, yellow-green eyes. This late bloomer grows 10 inches tall.

• Single Campernelle (*N. x odorus*) is a very old cultivar with two to three golden, fragrant flowers per stem. It grows 12 inches tall.

• Double Campernelle or Queen Anne's Double Jonquil (*N. x odorus plenus*) is an unusual old double with small, fragrant, deep yellow blossoms that are very full.

• Lent Lily (*N. pseudonarcissus*) is early-blooming with long trumpets and forward-swept petals that give it an informal, wild look. The flower color varies from cream to deep yellow.

**Large-Flowered Daffodils:** These daffodils are recommended as reliable perennials for the South include: 'Accent,' 'Barret Browning,' 'Carbineer,' 'Carlton,' 'Ceylon,' 'Duke of Windsor,' 'Falstaff,' 'Fortune,' 'Gigantic Star,' 'Ice Follies,' 'Mount Hood,' 'Mrs R.O. Backhouse,' 'Saint Patrick's Day' and 'Scarlet O'Hara'. Large daffodils should be divided and crowded bulbs thinned every three or four years to maintain vigorous blooming.

**Hybrid Tulips** are divided into a number of groups based on form and bloom time. The best for South Carolina gardens include:

**Single Late Tulips:** These tulips are one of the best groups for growing in warm climates. They have long-strong stems with deep, cup-shaped blooms in a wide range of colors. They grow between 14 and 30 inches tall. This group includes tulips formerly classified as Darwins and cottage tulips. Recommended cultivars include 'Halcro' (vibrant red); 'Queen of Night' (deep dark maroon); 'Renown' (rose-pink); 'Menton' (apricot-pink with inside of poppy red); 'Maureen' (pure white); 'Makeup' (ivory white with red edge); 'Temple of Beauty' salmon-rose); and 'Hocus Pocus'(yellow-tipped pink).

**Darwin Hybrid:** These tall tulips have the largest blooms of all tulips on strong stems in mid-spring. Good varieties for South Carolina include: 'Apeldoorn' (red); 'Golden Apeldoorn' (yellow); 'Olympic Flame' (red streaked with yellow); 'Parade'(dark red with black base edged yellow); 'Pink Impression'; and 'Daydream'(orange and yellow).

**Lily-Flowered:** These tulips have pointed blooms with arched petals on strong stems in mid-season. Excellent varieties include 'West Point' (yellow), 'White Triumphator' (white); 'Red Shine' (red); 'Mona Lisa' (red and white); and 'Marilyn'(white streaked rosy-pink).

**Species Tulips:** A few species tulips are from warm climates and don't need a cold period to flower. The following will naturalize in the South.

• *T. bakeri* 'Lilac Wonder' has small, star-like lilac-pink flowers with a yellow heart.

• Lady Tulip (*T. clusiana*) has flowers that look like a peppermint stick. The red and white flowers on 12- to 14- inch stems open in the sun to form a star.

• *Tulipa eichleri* has big, red and yellow striped flowers with pointed petals. This vigorous tulip flowers in early spring at 10 to 12 inches tall.
- **T. saxatilis** has mauve-pink flowers with yellow bases on 12 to 14 inch stems. This tulip needs poor soil, moderate winters and hot summers.
- **T. batalinii** has small, lightly fragrant flowers in pinkish red, lemon, apricot or peach. It grows to 6 inches tall.

**Hyacinths**

Few flowers can surpass the extensive color range and fragrance of hyacinths. Hyacinths can be left in the ground to multiply in the upper Piedmont, but flower size will decline as the bulbs multiply. If you want to have large flowers every year, dig the bulbs after the leaves wither and store to replant, or purchase new bulbs each fall. Roman hyacinths (*H. orientalis albulus*) have smaller flowers but are more persistent.

[Image of Hyacinth 'White Pearl']

**Hyacinth ‘White Pearl’**
Karen Russ, ©2007 HGIC, Clemson Extension

Hyacinths will need six to eight weeks of refrigeration in order to bloom in coastal areas. Wait to plant hyacinths until the soil temperature stays below 60 °F. This could be late October or November in the upper Piedmont to late December or early January in Coastal South Carolina. Plant hyacinth bulbs in full sun 3 to 6 inches apart 4 to 6 inches deep.

**Crocuses**

Crocus are one of the earliest-flowering spring bulbs. Many begin blooming in late winter. Plant crocuses in full sun or light shade in November, 3 inches deep and 3 to 4 inches apart. Separate overcrowded clumps and replant every few years after the foliage begins to wither.

The showy, large-flowered Dutch crocus do not naturalize as well as some of the earlier-flowering crocus species and cultivars. Excellent crocus for growing throughout South Carolina include: Cloth of Gold Crocus (*C. angustifolius*), Snow Crocus (*C. chrysanthus*), Tommies (*Crocus tommasinianus*) and their cultivars.

**Other Bulbs**

**Irices (Iris sp.)**: The small yellow Danford Iris (*I. danfordiae*) and the blue *Iris reticulata* are rarely perennial in South Carolina but are beautiful, early, jewel-like flowers. They bloom on 6-inch stems in early spring. Dutch iris (*I.x hollandica*) grow to 20 inches tall and thrive in soil that becomes dry and warm in summer. The flowers have an elegant, airy form. They are available in several shades of blue, white, purple and yellow.

**Ornamental Onions (Allium species)**: These beautiful relatives of onions have small flowers in globular clusters that range from just an inch wide to over 8 inches across. The flower colors range from white to bright yellow, lavender, blue and deep magenta. Some are less than a foot tall, while others can grow to 4 feet tall or even more. Some of the best alliums for the South are the Naples onion (*A. neapolitanum*), the drumstick allium (*A. sphaerocephalon*), *Allium ostrowkianum* and the star of Persia (*A. christophii*). All bloom in late spring.

**Anemone (Anemone species)**: The two anemones commonly grown from bulbs (actually small tubers) are Grecian windflowers (*Anemone blanda*) and poppy anemones (*Anemone coronaria*). The low-growing, early-blooming windflowers are blue, white or pink. They grow best in the Upstate. Poppy anemones have larger crimson, violet, pink or white flowers. They may need to be replanted every few years, since the foliage emerges in fall and is sensitive to hard freezing. Soak anemone tubers overnight before planting.

**Spanish Bluebell (Endymion hispanica)**: This is a late spring-flowering bulb for naturalizing in woody areas. It bears tall flower spikes of blue, pink or white. This species will thrive throughout South Carolina.
Summer Snowflake (*Leucojum aestivum*): This easy bulb actually blooms in mid-to late spring. Small, white, bell-shaped flowers tipped with green are borne on each 20-inch stem. They are good for naturalizing and are one of the few bulbs that will grow in damp soil. Snowflakes are often called snowdrops, but unlike true snowdrops (*Galanthus* species), they grow well in hot areas.

Grape Hyacinths (*Muscari species*): The fragrant purple flower clusters resemble tiny clusters of grapes. Grape hyacinths are easy to grow, and naturalize quickly. They are early-blooming and are often interplanted with other spring bulbs. Most grow to about 6 inches. Blue bottles, or starch hyacinths (*Muscari neglectum*) and feather hyacinths (*M. comosum plumosum*) grow especially well in the South.